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STAAS & HALSEY LLP SUITE 700 1201 NEW YORK AVENUE, N.W. WASHINGTON, DC 20005			EXAMINER PATEL, ASHOKKUMAR B	
			ART UNIT 2154	PAPER NUMBER

DATE MAILED: 10/31/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/788,474	Applicant(s) SHIOUCHI ET AL.	
	Examiner Ashok B. Patel	Art Unit 2154	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 August 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 9 and 10 is/are allowed.
- 6) ☒ Claim(s) 1-8 and 11-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-26 are subject to examination.

Continued Examination Under 37 CFR 1.114

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 08/08/2005 has been entered.
3. All claims are drawn to the same invention claimed in the application prior to the entry of the submission under 37 CFR 1.114 and could have been finally rejected on the grounds and art of record in the next Office action if they had been entered in the application prior to entry under 37 CFR 1.114. Accordingly, **THIS ACTION IS MADE FINAL** even though it is a first action after the filing of a request for continued examination and the submission under 37 CFR 1.114. See MPEP § 706.07(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Response to Arguments

4. Applicant's arguments filed 08/08/2005 have been fully considered but they are not persuasive for the following reasons:

Rejection under 35 U.S.C. § 102(e):

Applicant's argument:

"The present invention defines or dedicates a virtual communication channel based on role and policy information of the agents and allows the agents having the role and policy information to communicate with each other using the defined virtual communication channel. Thus, the broadcasting of a message in Hodjat is unlike the present invention's virtual communication channel defined based on role and policy information before exchange of information between the agents."

Examiner's response:

First of all, the reference teaches in col. 13, line 60 through col. 14, line 1, "The various agents in the agent-oriented interpretation unit 212 receive and reply to messages using a conventional declarative knowledge representation language known as KIF (Knowledge Interchange Format), a conventional communication language KQML (Knowledge Query and Manipulation Language) and a library of formal ontologies defining the vocabulary of various domains." The reference Hodjat is silent about "virtual communication channel", however, when inter-agent communication language KQML is used it is inherent to form "virtual communication channel" connecting agents to each

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other, and which is also supported by the reference SATO (US 2001/0039562 A1) wherein it teaches at page 5, para. [0082]-[0085], "The ACL is an inter-agent communications language in which messages communicated between agents are regulated, and comprises a knowledge representation language KIF (knowledge interchange format) for representing the knowledge such as the contents of information; a knowledge query and manipulation language KQML for regulating the verbal portion, referred to as a performative, of a transaction in an inter-agent communications; and an ontology indicating the type of word system used in an agent. [0083] When an agent tries to establish communications using the ACL, it is necessary to abstract the actual information as the knowledge (virtual knowledge base VKB) of an agent. According to the embodiment shown in FIG. 5, the information to be processed is the product/service database 100. Therefore, the information in the product/service database 100 is abstracted into the VKB of the database agent 200. [0084] The VKB can be accessed by retrieving a part of the knowledge described by the VKB, and specifying an operation (fetching, deleting, rewriting, etc.) to be performed on the retrieved knowledge. When the VKB is accessed in the ACL, the knowledge in the VKB to be processed in relation to the KIF is retrieved, and a corresponding operation is specified by the performative of the KQML. [0085] The relation of the KIF can be the relation between a specific field of a record of the VKB and its value, the arithmetic relation between numeric values, the relation defining a logical combination of relations, the relation for obtaining a secondary result by applying acceptable conditions, etc." Please also refer to WMBC Agent Web document for further information.

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The reference Hodjat teaches in " col. 7, lines 39-41, "This table also indicates what the agent 310 should do in response to a message containing a token that the agent has recognized." , in conjunction with its right previous text in col. 7, lines 34-36, "The interpreter unit 320 refers to an interpretation policy unit 322 to determine whether the input message is within the domain of responsibility of the agent 310. The interpretation policy unit 322 can be, for example, a table containing various words or tokens in the message that the agent 310 is assigned to recognize."

Thus the reference teaches ""a virtual communication channel formed based on a policy that is a collection of rules representing a relationship between attribute of an agent and a role assigned in accordance with the attribute" such that the virtual communication channel is created for selective connection of the agents within the network.

The reference teaches in col. 10, lines 10-44," If desired in a particular embodiment, the agents in an agent network can be grouped into agent communities. A "community" contains one or more agents, all having the same domain of responsibility. In a degenerate case, an agent by itself also constitutes a community of only the one agent. Various embodiments can employ different conventions for communicating between communities of agents. For example, in one embodiment, a query is performed only of an entire community of agents, not of any single agent within the community. Responses may come from the individual agents in the community or, in an embodiment, only from the community as a whole. Thus, as used herein, an agent

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which is part of a community of agents can be queried, in an appropriate embodiment, by querying the community of which it is part. That is, the querying of a group of agents is considered herein to include the querying of one or more agents within the group. Note that other types of agent groupings are possible in a given embodiment, other than communities. Note also that in a given embodiment, not all agents having the same domain of responsibility need to be within the same community."

Thus also the reference teaches "divides the policy into independent policies, and generates virtual private communities independently among agents exchanging information based on the respective policies on the virtual communication channel after policy division" and "virtual private communities independently among agents exchanging information" based on the respective policies on the virtual communication channel.

Rejection under 35 U.S.C. § 103(a):

Applicant's argument:

"The combination of Hodjat and Gupta does not teach or suggest an agent collaboration system "defining a virtual communication channel based on a policy" having rules representing a relationship between an attribute of an agent to enable an agent to communicate with other agents through the defined virtual communication channel as recited in independent claim 1 upon which claims 7, 8 and 17-21 depend.

Further, the combination of Hodjat and Gupta does not teach or suggest an agent collaboration system where "each agent obtains a required policy from the policy

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repository and stores it in the policy storing part" (claim 7), "an authentication entity authenticates access right of each agent to the virtual communication channel" (claim 8) and "an unauthorized access detecting pad detects unauthorized access" (claim 20), "the virtual communication channel is self-destroyed when the expiration date has come" (claim 19), "cancels connection to the virtual communication channel" upon a request (claim 21) and "invalidates the role" (claim 17) or "ignores a message having the LABEL information" (claim 18) when the expiration date has come."

Examiner's response:

Keeping in mind the teachings of the reference Hodjat stated above, the reference Gupta teaches "that the system provides one or more context trees, with each tree including two or more connected nodes, each node being associated with one or more selected node objects. Associated with each node is a blackboard for receiving and making available for reading, messages concerning the node object, a knowledge base containing information, facts, constraints and-or rules (Rules) concerning the node object, and an inference engine providing at least one logical rule that can be used to infer a logical conclusion based on at least one Rule in the knowledge base. (Abstract).

The reference also teaches a node runtime frame work (authentication entity is provided on the virtual communication channel) supporting public key encryption and signing (authentication) of messages and Awits.(col.6, lines 11-18) (an authentication entity is provided on the virtual communication channel, and the authentication entity

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authenticates access right of each agent to the virtual communication channel, and contents of a role held by the role-execution condition holding part of each agent.)

As stated in the previous office action, the combination enhances Hodjat by adding the functionality of Gupta's blackboard such that Hodjat's agent's interpretation policy unit derives the agents responsibility on the fly from the blackboard providing an agent with guidelines for accomplishing one or more tasks and allowing the agent to work independently or collaboratively with one or more other agents; the user does not exercise complete control and may, but need not, monitor the agent's progress. An agent relies upon indirect management as taught by Gupta.

Allowable Subject Matter

Referring to claims 9 and 10,

Claims 9 and 10 are allowed.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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6. Claims 1-6, 11-16, and 22-26 are rejected under 35 U.S.C. 102(e) as being anticipated Hodjat et al. (hereinafter Hodjat)(US 6, 144, 989).

Referring to claim 1,

The reference teaches an agent collaboration system for connecting agents to each other through a virtual communication channel (Abstract), each agent on the virtual communication channel (Fig.3, element 310) comprising:

a policy storing part for storing a policy that is a collection of rules containing a rule representing a relationship between an attribute of the agent and a role assigned in accordance with the attribute; the policy being used to define a virtual communication channel(Fig. 3, element 322, col. 7, lines 7-17 and 34-36)

a role assignment part having the policy storing part, for providing a role in accordance with the attributes of the agent based on the policy; (Fig.3, element 322, col.7, lines 36-41)

a role-execution condition storing part for storing the role assigned by the role assignment part and conditions for executing contents of the role; and a processing execution part for executing corresponding contents of a role when execution conditions for the contents of the role are satisfied (Fig.3, element 316, col. 8, lines 65-67 and col. 9, lines 1-14)

wherein the agent communicates with other agents through the virtual communication channel defined based on the policy.(col.4, lines 44-67 and col.5, lines 1-5, col. 10, line 10-28).

Referring to claim 2,

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The reference teaches an agent collaboration system according to claim 1, wherein the policy comprises, in addition to the rule representing a relationship between attributes of the agent and a role assigned in accordance with the attributes, at least one of a rule representing a relationship between attributes of a data object and an agent's reaction to operation with respect to the data object, a rule representing a relationship between a collection of the roles and a collection of the reactions, and a rule representing a relationship between the collections of the roles. (col.7, lines 45-61).

Referring to claim 3,

The reference teaches an agent collaboration system according to claim 1, wherein, in each agent, contents of a policy stored in the policy storing part is updated, and deletion/alteration of the rules, and addition of a new rule are conducted. (col.7, lines 51-53)

Referring to claim 4,

An agent collaboration system according to claim 1, wherein the processing execution part previously holds a processing function module, and selectively enables the processing function module in the processing execution part, based on the contents of a role held by the role-execution condition holding part, thereby installing a processing function. (col.8, lines 65-67)

Referring to claim 5,

The reference teaches an agent collaboration system according to claim 4, wherein, in installment of a processing function in the processing execution part, in a case where the processing function module required for execution of the contents of a role is

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not previously held, the system receives a required processing function module from a resource on a network through the virtual communication channel to use it. (col.9, lines 20-33).

Referring to claim 6,

The reference teaches an agent collaboration system according to claim 1, wherein a policy generated by an agent is distributed to another agent, the agent having received the distributed policy obtains a role in accordance with attributes of the agent using the role assignment part based on the policy, thereby installing the processing execution part, and a virtual communication channel is formed among agents having the distributed policy in common. (col. 8, lines 20-29).

Referring to claim 11,

The reference teaches an agent collaboration system according to claim 1, wherein each agent is capable of selecting participation or nonparticipation on the virtual communication channel. (col.4, lines 51-55).

Referring to claims 12, 13, 14 and 15,

The reference teaches an agent collaboration system according to claim 1, wherein the policy storing part generates and manages independent policies, and generates virtual private communities independently among agents exchanging information based on each policy on the virtual communication channel and , wherein the policy storing part integrates policy sets selected from policies independently generated and managed, and generates virtual private communities among agents exchanging information based on the integrated policy on the virtual communication channel, and wherein the policy

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storing part divides the policy into independent policies, and generates virtual private communities independently among agents exchanging information based on the respective policies on the virtual communication channel after policy division and, wherein the policy storing part stores a first policy and a second policy belonging to the first policy, in which a new rule is added to the first policy, and a virtual private community among agents based on the second policy are generated in a nested manner on a virtual private community among agents based on the first policy. (col.10, lines 10-44).

Referring to claim 16,

The reference teaches an agent collaboration system according to claim 1, wherein an agent making a request with respect to another agent transmits request information having LABEL (reaction to the request) information based on the policy, the agent that receives the request information and responds to the request information transmits response information having LABEL information based on the policy, and the agent that transmits the request receives response information having the LABEL information based on the policy.(col. 7, lines 21-33, col. 8, lines 20-29).

Referring to claim 22,

The reference teaches an agent collaboration method for brokering information communication among agents present on a network, comprising, in each agent (Fig.3, element 310) on the virtual communication channel:

storing a policy that is a collection of rules containing a rule representing a relationship between an attribute of an agent and a role assigned in accordance with the

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attribute, and assigning a role in accordance with the attributes of each agent based on the policy, the policy being used to define a virtual communication channel (Fig.3, element 322, col. 7, lines 7-17 and 34-41)

storing the assigned role and conditions for executing contents of the role; executing corresponding contents of a role when execution conditions for the contents of the role are satisfied: (Fig. 3, element 316, col.8, lines 65-67 and col.9, lines 1-14) and

allowing the agents to communicate with other agents through the virtual communication channel defined based on the policy. (col.4, lines 44-67 and col.5, lines 1-5, col. 10, line 10-28).

Referring to claim 23,

Claim 23 is a claim to a computer-readable recording medium storing a processing program for the agent collaboration method of claim 22. Therefore, claim 23 is rejected for the reasons set forth for claim 22.

Referring to claim 24,

The reference teaches a virtual communication channel for brokering information communication among agents present on a network (col. 10, lines 10-11), which is controlled based on a policy that defines a virtual communication channel and that is a collection of rules containing a rule representing a relationship between attributes of an agent and a role assigned in accordance with the attributes(col. 10, lines 11-13, col. 7, lines 7-17 and 34-41), allows each agent to have a role in accordance with the attributes thereof based on the policy, and virtually connects the operating agents to

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other agents based on the policy through the virtual communication channel defined, and brokers collaboration of each agent through execution of the contents of the role.

((col.4, lines 44-67 and col.5, lines 1-5, col. 10, line 10-28).

Referring to claim 25,

The reference teaches a virtual private community provided by a virtual communication channel for brokering information communication among agents present on a network (col. 10, lines 10-11), which is controlled based on a policy that is a collection of rules containing a rule representing a relationship between attributes of an agent (col. 10, lines 11-13), and a role assigned in accordance with the attributes, allows each agent to have a role in accordance with the attributes thereof based on the policy, and virtually connects the operating agents to each other based on the policy, and brokers collaboration of each agent through execution of the contents of the role (col. 10, lines 14-29).

Referring to claim 26,

The reference teaches a method of connecting agents of a network with each other through a virtual communication channel(col. 10, lines 10-11), comprising:
assigning each of the agents a role in accordance with a corresponding attribute of each agent and based on policy information including rules representing a relationship between the corresponding attribute of each agent and the role assigned in accordance with the attribute, the policy being used to define a virtual communication channel (Fig. 3, element 322, col. 7, lines 7-17 and 34-62); and

dynamically connecting the agents to each other based on the policy information through the virtual communication channel, where contents of the corresponding role assigned to the agents is executed when execution conditions of the respective role is satisfied. (col. 10, lines 10-29).

Referring to claim 27,

The reference teaches a method of connecting agents of a network via a virtual communication channel, comprising: defining a virtual communication channel for generating a virtual community among a selected number of the agents based on a role assigned to the agents and policy information including rules representing a relationship between attributes of the agents" and "connecting the selected number of agents to each other and exchanging information between the agents in the virtual community using the defined virtual communication channel.(col. 10, line 10-28, Fig. 3, col. 7, lines 7-17 and 34-62)

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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8. Claims 7, 8, 17-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hodjat et al. (hereinafter Hodjat)(US 6, 144, 989) in view of Gupta et al. (hereinafter Gupta)(US 6, 513, 059)

Referring to claim 7,

Keeping in mind the teachings of the reference Hodjat as stated above, the reference fails to teach wherein a policy repository storing the policy is provided on the virtual communication channel, and each agent obtains a required policy from the policy repository and stores it in the policy storing part. The reference Gupta teaches the system and method for facilitating exchange of information on a computer network such as internet.(Abstract). The reference also teaches that the system provides one or more context trees, with each tree including two or more connected nodes, each node being associated with one or more selected node objects. Associated with each node is a blackboard for receiving and making available for reading, messages concerning the node object, a knowledge base containing information, facts, constraints and-or rules (Rules) concerning the node object, and an inference engine providing at least one logical rule that can be used to infer a logical conclusion based on at least one Rule in the knowledge base. (Abstract). The reference also teaches that an Awit's (agent's) activity and knowledge at a context node (a policy repository storing the policy) can be decoupled. And provides change notification for the awits that subscribe to that node. (col.4, lines 64-67 and col.5, lines 1-4).(each agent obtains a required policy from the policy repository and stores it in the policy storing part.) Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention was made to

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modify and enhance Hodjat by adding the functionality of Gupta's blackboard such that Hodjat's agent's interpretation policy unit derives the agents responsibility on the fly from the blackboard providing an agent with guidelines for accomplishing one or more tasks and allowing the agent to work independently or collaboratively with one or more other agents; the user does not exercise complete control and may, but need not, monitor the agent's progress. An agent relies upon indirect management as taught by Gupta.

Referring to claim 8,

Keeping in mind the teachings of the reference Hodjat as stated above, the reference fails to teach wherein an authentication entity is provided on the virtual communication channel, and the authentication entity authenticates access right of each agent to the virtual communication channel, and contents of a role held by the role-execution condition holding part of each agent. The reference Gupta teaches the system and method for facilitating exchange of information on a computer network such as internet.(Abstract). The reference also teaches a node runtime frame work (authentication entity is provided on the virtual communication channel) supporting public key encryption and signing (authentication) of messages and Awits.(col.6, lines 11-18) (an authentication entity is provided on the virtual communication channel, and the authentication entity authenticates access right of each agent to the virtual communication channel, and contents of a role held by the role-execution condition holding part of each agent.) Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention was made to modify and enhance Hodjat

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by adding the functionality of Gupta's node runtime framework such that Hodjat's interpretation policy unit derives the authentication of the agents from the node framework and allowing the agent to work independently or collaboratively with one or more other agents; the user does not exercise complete control and may, but need not, monitor the agent's progress. An agent relies upon indirect management as taught by Gupta..

Referring to claims 17, 18 and 19,

Keeping in mind the teachings of the reference Hodjat as stated above, although the reference teaches that agents can be replaced at run-time (col.10, lines 45-46), the reference fails to teach wherein a role held by the role-execution condition storing part has an expiration date, and invalidates the role when the expiration date has come, and wherein the LABEL information has an expiration date, and a message having the LABEL information is ignored in each agent when the expiration date has come. and, whereon the virtual communication channel has an expiration date, and the virtual communication channel is self-destroyed when the expiration date has come. The reference Gupta teaches the node framework providing (a) maintain top-level context tree by adding/deleting concept sub-trees on request from application domain agents; (b) manage context node system by controlling blackboard operations associated with the node; (c) pass messages up and down the tree; (d) support persistent Awits state and persistent messages; (e) support Awits mobility among context nodes; and (f) support public key encryption and signing (authentication) of messages and Awits. (col. 6, lines 10-19). The reference Gupta teaches an Awit is an active agent that can be

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programmed on the fly and that can create and assign tasks to other Awits, using a consistent agent programming language referred to as ASpeak. ASpeak normalizes user or application or system performatives (assigned tasks and responsibilities) in a consistent language, manages life cycles of Awits, and delegates authority. (col.6, lines 52-58). Thereby, the reference teaches a role held by the role-execution condition storing part has an expiration date, and invalidates the role when the expiration date has come (manages life cycles of Awits), and as such the agent ceases to exist, so does its reaction and the communication channel. Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention was made to modify and enhance Hodjat by using Gupta's ASpeak such that Hodjat's agent's life cycle can be managed and allowing the agent to work independently or collaboratively with one or more other agents; the user does not exercise complete control and may, but need not, monitor the agent's progress. An agent relies upon indirect management as taught by Gupta..

Referring to claims 20 and 21,

Keeping in mind the teachings of the reference Hodjat as stated above, the reference fails to teach wherein an unauthorized access detecting part for detecting unauthorized access to the virtual communication channel is provided on the virtual communication channel or the agent, and as a result of that unauthorized access to the virtual communication channel is detected by the unauthorized access detecting part, each agent cancels connection to the virtual communication channel, thereby dynamically eliminating the virtual communication channel. And , wherein each agent

receives a request for destruction of the virtual communication channel from either one of the agents on the virtual communication channel, and cancels connection to the virtual communication channel, thereby dynamically eliminating the virtual communication channel. The reference Gupta teaches the node framework providing (a) maintain top-level context tree by adding/deleting concept sub-trees on request from application domain agents; (b) manage context node system by controlling blackboard operations associated with the node; (c) pass messages up and down the tree; (d) support persistent Awits state and persistent messages; (e) support Awits mobility among context nodes; and (f) support public key encryption and signing (authentication) of messages and Awits. (col. 6, lines 10-19). Thereby, the reference teaches an unauthorized access detecting part for detecting unauthorized access to the virtual communication channel is provided on the virtual communication channel or the agent, and as a result of that unauthorized access to the virtual communication channel is detected by the unauthorized access detecting part, each agent cancels connection to the virtual communication channel, thereby dynamically eliminating the virtual communication channel. Thereby, the reference also teaches the communication among the agents. Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention was made to modify and enhance Hodjat by using Gupta's frame work such that unauthorized access can be detected and communicated to participating agents to not to participate anymore. Thus the system can be managed and allowing the agent to work independently or collaboratively with one or more other agents; the user does not exercise complete control and may, but

need not, monitor the agent's progress. An agent relies upon indirect management as taught by Gupta..

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ashok B. Patel whose telephone number is (571) 272-3972. The examiner can normally be reached on 8:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John A Follansbee can be reached on (571) 272-3964. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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